

## Best Available Copy

### What is claimed is:

1. A socket for extending memory modules, the socket comprising:  
a socket pin fixing apparatus for loading two memory modules, that is, a first memory module and a second memory module, in opposite directions;  
5 a first socket pin for connecting a tab located on one surface of the first memory module to a tab located on one surface of the second memory module by passing through the socket pin fixing apparatus; and  
a second socket pin for connecting a tab located on the other surface of the first memory module to a tab located on the other surface of the second  
10 memory module by passing through the socket pin fixing apparatus.
2. A socket for extending memory modules, the socket comprising:  
a socket pin fixing apparatus for loading two memory modules, that is, a first memory module and a second memory module, in the same direction;  
15 a first socket pin for connecting a tab located on one surface of the first memory module to a tab located on one surface of the second memory module by passing through the socket pin fixing apparatus; and  
a second socket pin for connecting a tab located the other surface of the first memory module to a tab located on the other surface of the second  
20 memory module by passing through the socket pin fixing apparatus.
3. A socket for extending memory modules, the socket comprising:  
a socket pin fixing apparatus for loading N (N is an integer and is greater than or equal to 3) memory modules, that is, a first memory module through an  
25 Nth memory module, in the same direction;  
a first socket pin for connecting a tab of one surface of the first memory module to a tab of one surface of the Nth memory module by passing through the socket pin fixing apparatus;  
a second socket pin for connecting a tab of the other surface of the first  
30 memory module to a tab of one surface of a second memory module by passing through the socket pin fixing apparatus; and  
an Nth socket pin for connecting a tab of the other surface of the (N-1)th memory module to a tab of the other surface of the Nth memory module by passing through the socket pin fixing apparatus,  
35 wherein third through (N-1)th socket pins are formed by the same method as the connection method of the second socket pin.

## Best Available Copy

4. A socket for extending memory modules, the socket comprising:  
a socket pin fixing apparatus for loading at least one memory module in  
the same direction; and

5 at least one socket pin for electrically connecting the tabs of both  
surfaces of the memory module by passing through the socket pin fixing  
apparatus.

10 5. A memory system comprising:  
a plurality of memory modules;  
at least one through socket for electrically connecting the plurality of  
memory modules to each other; and  
a turn around socket for electrically connecting at least one surface of  
one of the plurality of memory modules to the other surface of the same  
15 memory module.

6. The memory system of claim 5, wherein each of the plurality of  
memory modules comprises:  
a plurality of memory devices loaded on both surfaces of each of the  
20 plurality of memory modules; and  
a total of four tabs that are located at both ends of both surfaces of each  
of the plurality of memory modules and operate as electrical paths.

25 7. The memory system of claim 5, wherein each of the at least  
one through socket comprises:  
a socket pin fixing apparatus for loading two memory modules, that is, a  
first memory module and a second memory module, in opposite directions;  
a first socket pin for connecting a tab located on one surface of the first  
memory module to a tab located on one surface of the second memory module  
30 by passing through the socket pin fixing apparatus; and  
a second socket pin for connecting a tab located on the other surface of  
the first memory module to a tab located on the other surface of the second  
memory module by passing through the socket pin fixing apparatus.

35 8. The memory system of claim 5, wherein each of the at least one  
through socket comprises:

# Best Available Copy

a socket pin fixing apparatus for loading two memory modules, that is, a first memory module and a second memory module, in the same direction;

a first socket pin for connecting a tab located on one surface of the first memory module to a tab located on one surface of the second memory module by passing through the socket pin fixing apparatus; and

a second socket pin for connecting a tab located on the other surface of the first memory module to a tab located on the other surface of the second memory module by passing through the socket pin fixing apparatus.

9. The memory system of claim 5, wherein each of the at least one through socket comprises:

a socket pin fixing apparatus for loading N (N is an integer and is greater than or equal to 3) memory modules, that is, a first memory module through an Nth memory module, in the same direction;

a first socket pin for connecting a tab of one surface of the first memory module to a tab of one surface of the Nth memory module by passing through the socket pin fixing apparatus;

a second socket pin for connecting a tab of the other surface of the first memory module to a tab of one surface of a second memory module by passing through the socket pin fixing apparatus; and

an Nth socket pin for connecting a tab of the other surface of the (N-1)th memory module to a tab of the other surface of the Nth memory module by passing through the socket pin fixing apparatus,

wherein third through (N-1)th socket pins are formed by the same method as the connection method of the second socket pin.

10. The memory system of claim 5, wherein each of a selected number of at least one through socket comprises:

a first socket pin fixing apparatus for loading two memory modules, that is, a first memory module and a second memory module, in the same direction;

a first socket pin for connecting a tab located on one surface of the first memory module to a tab located on one surface of the second memory module by passing through the socket pin fixing apparatus; and

a second socket pin for connecting a tab located in the other surface of the first memory module to a tab located on the other surface of the second memory module by passing through the socket pin fixing apparatus,

## Best Available Copy

wherein each of the remaining number of at least one through socket comprises:

5 a second socket pin fixing apparatus for loading three memory modules, that is, a third memory module, a fourth memory module, and a fifth memory module, in the same direction;

a third socket pin for connecting a tab located on one surface of the third memory module to a tab located on one surface of the fifth memory module by passing through the second socket pin fixing apparatus;

10 a fourth socket pin for connecting a tab located on the other surface of the third memory module to a tab located on one surface of the fourth memory module by passing through the second socket pin fixing apparatus; and

a fifth socket pin for connecting a tab located on the other surface of the fourth memory module to a tab located on the other surface of the fifth memory module by passing through the second socket pin fixing apparatus.

15

11. The memory system of claim 5, wherein the turn around socket comprises:

a socket pin fixing apparatus for loading at least one memory module in the same direction; and

20 at least one socket pin for electrically connecting tabs of both surfaces of the memory module to each other by passing through the socket pin fixing apparatus.